Indiana Public Health Conference
September 15th, 2016
Back to the Future of Active Living

Indiana State Department of Health
Division of Nutrition and Physical Activity

Health by Design
creating built environments to foster healthy living
an ALLIANCE FOR HEALTH PROMOTION initiative
Moving from individual interventions to policy, systems and environmental (PSE) change:

Making the healthy choice the easy choice
A way of life that integrates physical activity into daily routines.

- Walkable
- Bikeable
- Transit-oriented
- Universally accessible
- A place where streets are destinations
“When communities organize themselves around the automobile as the primary mode of transportation, they effectively engineer physical activity right out of the equation.”

–Neil Caudle

As a result, we get incomplete streets that are not aware of their human context;
... incomplete streets that turn the most vulnerable users into second-class citizens:

(1/4 of walking trips take place on roads without sidewalks or shoulders)
LET’S CAPTURE THE POTENTIAL

Of all U.S. trips:
- 50% are under 3 miles
- 28% are 1 mile or less
- 72% of trips 1 mile or less are driven

These are walkable and bikeable trips!

Let’s engineer physical activity BACK into our daily lives.

2008 National Household Travel Survey
THEORY OF WALKABILITY

To be favored, a walk must be:

- Useful
- Safe
- Comfortable
- Interesting
GROWING DEMAND IN INDIANA

• There are now 16 Complete Streets policies in Indiana
  – INDOT internal policy

• The percent of local projects that focus on pedestrian trails, paths and Safe Routes to School infrastructure is growing
Why Build for Active Living?
ADULT PHYSICAL ACTIVITY IN INDIANA

• Only 44% of adult Hoosiers meet aerobic physical activity recommendations

• Only 16% of adult Hoosiers meet both aerobic and muscle strengthening recommendations

CDC, 2013 BRFSS
Percent of high school students by days of physical activity, Indiana, 2015

- 0 Days: 15.4%
- 5+ Days: 46.5%
- 7 Days: 25.3%

2015 Youth Risk Behavior Survey
Cognitive Effects of Physical Activity in Pre-adolescent Children

- Average composite of 20 students’ brains taking the same test after sitting quietly for 20-minute walk.

Hillman et al. (2014)
WALKING AND BICYCLING TO SCHOOL

48 percentage of children who walked or bicycled to school in 1969

13 percentage of children who walked or bicycled to school in 2009

1969 Nationwide Personal Transportation Survey (USDOT, 1972)
National Center for Safe Routes to School
The 5 E’s of Safe Routes to School

Encouragement
- Participate in National Walk to School Day
- Implement Walking School Buses

Enforcement
- Appoint school rep. to attend Neighborhood Crime Watch mtgs
- Institute No Helmet, No Ride policy for all students

Engineering
- Improve sidewalk conditions near school and along main routes
- Update curb ramps on Tier 1 routes to ADA standards

Education
- Train safety patrol
- Conduct bicycle rodeo

Evaluation
- Conduct student survey annually
- Conduct targeted infrastructure assessment twice/year
IMPROVING MOBILITY FOR PEOPLE WITH DISABILITIES & OLDER ADULTS

• 31% of adults with disabilities lack adequate transportation

• Older adults account for 18% of pedestrian fatalities but only 13% of the population

Photo: Dan Burden
Walking and Older Adults

- MRI Study of Brain Scans of 120 Older Adults
  - Half – 3 days a week 45 minutes mostly walking
  - Half – No extra aerobic exercise

- One year later –
  - Walkers brain size increased 1.5%
  - Control group brain size decreased 1.5%
Transportation Improvements that Support Better Health Outcomes
Complete Streets Policy Changes the Process for Street Design

The old way is to determine the project scope for vehicles, then require proof that other modes are necessary.

The new way is to assume that ALL modes will be required and justify why not to include them.
Complete Streets in Indiana

Complete Streets Policies now cover 48% of Indiana Population (over 3 million people)
Complete Streets
Create Safe Roadways

Sidewalks reduce pedestrian crashes 88%.

Medians reduce crashes 40%

Road diets reduce crashes 29%

Countdown signals reduce crashes 25%
“The desire to go ‘through’ a place must be balanced with a desire to go ‘to’ a place.”

Pennsylvania and New Jersey DOT 2007 “Smart Transportation Guide”
This Approach Asks if Your Project or Policy:

• Is it appropriate for the context of the street?
• Increases safety for pedestrians and/or bicyclists?
• Slows vehicle speeds?
• Creates or enhances public space?
• Increases business for local shops and restaurants?
• Serves all users?
Complete Street Elements that Implement Community Change

- Road Diets
- Curb Extension or Bumpouts
- Traffic Calming
- Intersection Improvements
- Parklets
- Wayfinding
- Bicycle and Pedestrian Accommodations
Paint is Our Friend!

- Reducing Lane widths
- Road Diets
- Traffic Calming
- Retrofitting Bikeways
Road Diets

Road diets reduce crashes 29% per mile of roadway (USDOT FHWA)
Reducing Lane Widths

Reduce lane widths to accommodate bicyclists
Buffered Bike Lanes

Paint can buffer a bike lane from parked cars or traffic

Graphic: NACTO
Protected Bike Lanes

Protected bike lanes attract a wider range of bicyclists
Advisory Bike Lanes

An advisory bike lane is similar to a regular bike lane, but is used on low-volume streets that are narrow. An advisory bike lane is marked with a dotted line to the left side of the lane. These markings give bicyclists a space to ride, but are also available to motorists if space is needed to pass oncoming traffic.

Advisory bike lanes are currently located on Adams Street between 6th and 7th Streets. At this location, the yellow center line was removed and advisory bike lanes were added to the street. Narrow travel lanes now require motorists to be more cautious when negotiating passing vehicles. Advisory lanes are also present on East 7th Street and Longview Avenue from Union Street to Smith Road.

When you drive:
- To safely meet an oncoming motorist you are allowed to merge into the bike lane. However, you must yield to bicyclists in the bike lane.
- Even though the travel area for cars is narrow, it is still a 2-way street.

When you bike:
- Be more prepared for a motorist to enter the bike lane than on typical streets.
- Always use caution and assume turning or merging motorists do not see you.

For questions about information in this packet, please call 812-349-3423.

Guide to Understanding Bicycle and Pedestrian Infrastructure in Bloomington

Advisory Bike Lanes
Wide Paved Shoulders

A paved shoulder for bikes (Wisconsin Bike Federation)

A shared use shoulder with signage can be a temporary solution (US FHWA)
Traffic Calming at Intersections

Higher speeds at intersections reduce drivers peripheral vision.

Slow speeds at intersections by removing parking within 20-25 feet of the intersection and extending the curbs.
Curb Extensions
Can be Simple

Curb extensions can be as simple as paint or prefabricated curb stops.
...or More Developed

Reduces crossing distance.

Improves sight distance and sight lines.

Prevents parked cars from blocking crosswalks.

Creates space for curb ramps, landings and landscaping.
Bioswales and raingardens mitigate runoff entering storm sewers.

...Serve Multiple Purposes
Curb Extensions can Create Gateways

Curb extensions can be used to define gateways into commercial areas and contain landscaping and amenities.
Parklets and Placemaking

Parking areas and walkways have the potential to host a variety of uses.
Street Furniture and Art

Batesville, Indiana

Carmel Indiana

Yarn Bombing in Bloomington
Simple pavement markings and high visibility signs.
Better Mid-block Crossings

Pedestrian refuge with Rectangular Rapid Flashing Beacon was a pilot project and proved successful in increasing pedestrian safety.
Rectangular Rapid Flashing Beacon
Pedestrian Hybrid Beacon (HAWK)
Traffic Calming
And Pedestrian Crossings

Kingsport TN
Traffic Calming
Wayfinding encourages walking and biking by making trips predictable.
Begin identifying your opportunities

- Adopt Complete Streets Policy
- Utilize or create a Bicycle and Pedestrian Advisory Council
- Connect Off-street Trails to On-street Bike Facilities
- Design Bicycle and Pedestrian Friendly Local Streets
- Promote Mixed-use Development and Open Space
- Build More Complete Streets Through Small Incremental Steps
Thank You!

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